



Master of Pharmacy
degree (MPharm)

Queen's University Belfast
Report of a reaccreditation event
April 2018

Event summary and conclusions

Provider	Queen's University, Belfast
Course	Masters of Pharmacy degree (MPharm)
Event type	Reaccreditation
Event date	18-19 April 2018
Accreditation period	2018/19 – 2023/24
Outcome	Approval The accreditation team agreed to recommend to the Registrar of the General Pharmaceutical Council (GPhC) and to the Pharmaceutical Society of Northern Ireland that the MPharm degree provided by Queen's University Belfast should be reaccredited for a further period of six years.
Conditions	There were no conditions
Standing conditions	Please refer to Appendix 1
Recommendations	No recommendations were made.
Registrar decision	Following the event, the Registrar of the GPhC accepted the accreditation team's recommendation and approved the reaccreditation of the programme for a further period of 6 years.
Key contact (provider)	Dr Sharon Haughey, Director of Education (Pharmacy)
Accreditation team	Professor Stephen Denyer (Team Leader), Pro Vice-Chancellor (Learning and Teaching), University of Brighton Professor Andy Husband (Academic), Professor of Clinical Pharmacy and Head of School, Newcastle University Dr Geoffrey Hall (Academic), Retired, formerly Associate Head, Leicester School of Pharmacy, De Montfort University Professor Anne Watson (Pharmacist), Postgraduate Pharmacy Dean, NHS Education for Scotland Mrs Samantha Amos (Pharmacist) Senior Clinical Pharmacist, Maidstone and Tunbridge Wells NHS Trust Ms Susan Bradford (Lay member), Solicitor (non-practising)
GPhC representative	Ms Joanne Martin, Quality Assurance Manager, GPhC
PSNI representative	Mr Daniel Young, Pre-Registration Lead, Pharmaceutical Society of Northern Ireland
Rapporteur	Professor Brian Furman, Emeritus Professor of Pharmacology, University of Strathclyde

Introduction

Role of the GPhC

The General Pharmaceutical Council (GPhC) is the statutory regulator for pharmacists and pharmacy technicians and is the accrediting body for pharmacy education in Great Britain. The GPhC is responsible for setting standards and approving education and training courses which form part of the pathway towards registration for pharmacists. The UK qualification required as part of the pathway to registration as a pharmacist is a GPhC-accredited Master of Pharmacy degree course (MPharm). This reaccreditation event was carried out in accordance with the GPhC's 2011 MPharm Accreditation Methodology and the course was reviewed against the GPhC's 2011 education standards 'Future Pharmacists: Standards for the initial education and training of pharmacists'.

The GPhC's right to check the standards of pharmacy qualifications leading to annotation and registration as a pharmacist is the Pharmacy Order 2010. It requires the GPhC to 'approve' courses by appointing 'visitors' (accreditors) to report to the GPhC's Council on the 'nature, content and quality' of education as well as 'any other matters' the Council may require.

The powers and obligations of the GPhC in relation to the accreditation of pharmacy education are legislated in the Pharmacy Order 2010. For more information, visit:

<http://www.legislation.gov.uk/uksi/2010/231/contents/made>

Background

The MPharm at the Queen's University Belfast is offered through the School of Pharmacy, which is one of four schools in the Faculty of Medicine, Health and Life Sciences. A pharmacy degree has been offered at Queen's University Belfast since 1929, at that time through the Belfast College of Technology, moving in 1971 to the new Department of Pharmacy in Queen's University. The MPharm was last accredited in 2012. On that occasion the course was re-accredited for a full period of six years, with one recommendation. The recommendation was based on the fact that some community pharmacy experience was provided outside the quality management of the University; this was not acceptable either as a placement or to meet the outcomes in Standard 10. In response to this, the School developed a robust, professional and quality assured framework for community placements, delivered in partnership with a network of Queen's accredited 'Student Training Centre' pharmacies across Northern Ireland. This was based on pharmacists completing an online training package, electronically submitting a training agreement and subsequently becoming an accredited partner of the Community Pharmacy Placement Network; at the 2015 interim visit, the team agreed that this addressed the previous recommendation.

Documentation

Prior to the event, the provider submitted documentation to the GPhC in line with the agreed timescales. The documentation was reviewed by the accreditation team and it was deemed to be satisfactory to provide a basis for discussion.

Pre-visit

In advance of the main visit, a pre-visit meeting took place by teleconference on 28 March 2018. The purpose of the pre-visit meeting was to prepare for the event, allow the GPhC and the university to ask any questions or seek clarification, and to finalise arrangements for the visit.

The event

The event began with a private meeting of the accreditation team and GPhC representatives on 18 April 2018. The remainder of the event took place onsite at Queen's University Belfast on 18-19 April 2018, and comprised a series of meetings with staff and students of the University.

Declarations of interest

Professor Husband declared that Professor David Jones is External Examiner at the University of Newcastle; he also advised Queen's University on the MPharm in 2011 and has other academic connections with the School. Similarly, Professor Denyer has significant academic connections with the School of Pharmacy, particularly in relation to examining the PhD theses of several members of staff. The team agreed that none of these constituted conflicts of interest. Mr Daniel Young graduated from Queen's University in 1995; the team agreed that this did not constitute a conflict of interest in the context of his role in this reaccreditation event.

Key findings

Standard 1: Patient and public safety

All criteria relating to this standard are met. (See Appendix 2 for criteria)

The ethos of the School is to promote the development of students as future professionals who have the patient's health as their primary concern. There are systems in place to ensure that students do not jeopardise patient safety; these include appropriate supervision and monitoring, and allowing students only to do tasks for which they are competent, as well as having established mechanisms and procedures to deal with fitness to practise. From the beginning of the programme, students are introduced to the GPhC Standards for Pharmacy Professionals and the Pharmaceutical Society NI Code; these are used and re-emphasised throughout the four years of the course. The importance of acting professionally is reinforced, with patient-oriented modules and placements in all years being used to apply professionalism to practice, for example by discussing the importance of confidentiality on placements. There is a clear reporting system to ensure that all concerns are reported and dealt with in a timely manner; on placements, any issues concerning MPharm students that may impact negatively on patient safety are identified by supervisory staff who, in turn, notifies the relevant staff member within the School. Throughout the hospital placements, students' activities are overseen by pharmacist tutors; all patient-centred tasks completed by students are first practised in a simulated or role play situation, and, before performing these tasks themselves using patients, students observe the tasks being undertaken by a pharmacist. Hence, students are never asked to work beyond their competence. Students must sign an agreement regarding confidentiality and professional behaviour while on placement. Students' safe practice requires the staff to monitor their behaviour, and address any unsafe practice, with appropriate action being taken as needed. Where students' performance or behaviour is such that they would be likely to pose a risk to patients or the public, such students would not be allowed to graduate with an MPharm.

Standard 2: Monitoring, review and evaluation of initial education and training

All criteria relating to this standard are met.

There are systems in place to monitor, review and evaluate entry requirements, the quality of teaching, learning and assessment, and of placements and other practice learning opportunities, appraisal and feedback systems for students, and supervision requirements, as well as educational resources and capacity. Quality assurance of the MPharm degree programme is undertaken through module review, which takes place after each module is delivered and before it is taught again, annual programme review (APR), whereby programmes are monitored each year, and through the Periodic Review and Enhancement Process (PREP), through which Schools are reviewed along with programme validation every five to six years. Within the School of Pharmacy, the Directors of Education for the School complete the APR report, which may include issues for the University to consider through the Education Committee. Schools submit APR documentation to the Faculty Annual Programme Review Panel, serviced by Academic Affairs. The Panel provides feedback to the Schools, and to the University Education Committee, indicating areas which require attention, and areas of good practice for dissemination across the University.'

The APR report covers all aspects of the programme and includes module review reports, external examiners' reports, minutes of boards of examiners, and key statistical data such as student achievement and progression, as well as feedback from staff and students, such as minutes of the Staff-Student Consultative Committee (SSCC). The SSCC provides one mechanism for students to provide feedback on the programme, along with module evaluation and teaching evaluation questionnaires. Input to the programme is also provided by a stakeholder group comprising people from all sectors, including patient representatives, for example, of Diabetes UK, and NI Chest Heart and Stroke. Students undertake both hospital and community placements as part of their MPharm degree. To ensure the quality of hospital placement provision, all pharmacists who are involved in student teaching on placements are provided with appropriate preparatory material and undergo a half day interactive 'Train the Trainers' course, either at Queen's University or at the University of Ulster; the training is updated every three years. Detailed briefings are also provided for all pharmacists supervising students on placements; the briefings address the tasks that the students will undertake during their visits. Following the placements, there are debriefing sessions and the pharmacists receive individual feedback from the students whom they have supervised, and students also complete placement feedback questionnaires covering all aspects. The placements are discussed at annual placement review days, with subsequent modification where required. The quality assurance of community pharmacy placements requires pharmacist tutors to complete an online CPD-accredited training programme, after which they electronically submit a training agreement, subsequently becoming accredited partners of the community pharmacy placement network. Each accredited placement pharmacy receives a practice visit at least once every three years from the community pharmacy placement coordinator. Upon completion of each placement, electronic feedback is obtained from both pharmacists and students via online questionnaires (through Survey Monkey®).'

Standard 3: Equality, diversity and fairness

Both criteria relating to this standard are met.

While the Equality Act 2010 does not apply to Northern Ireland, there is a comprehensive framework of equality and anti-discrimination laws. The University seeks to provide equality to all, irrespective of gender, marital or civil partnership status, religious belief, political opinion, race, disability, sexual orientation or age. The School of Pharmacy holds an Athena SWAN Silver Award, for which a renewal application is currently under consideration. The students receive a general introduction to equality and diversity issues relating to pharmacy, discussing cultural issues relevant in the healthcare setting and strategies to enhance cultural competence and cross-cultural communication; they also participate in a student-led learning activity to promote cultural awareness, the aim of which is to provide first year students with a better understanding

of some cultural norms in other countries and how their healthcare systems differ from the UK National Health Service, as well as enhancing the cultural sensitivity and integration of students. Students are required to take into account the cultural and ethnic needs of their patients when considering treatment, and, as stated in the Pharmaceutical Society NI Code, know that they must ensure that their personal views about an individual's lifestyle, religious beliefs, political opinion, race, gender, sexual orientation, disability or other perceived status does not affect their treatment of any individual or group.

Standard 4: Selection of students

All criteria relating to this standard are met.

The University has a strong widening participation agenda, which includes engagement with school children of all ages to develop an aspiration towards entering higher education. Through its 'Pathways Opportunity Programme', the University targets those potential students who "are most able and least likely" to achieve; here, students participate in a series of events, including a week-long summer school where they undergo assessments that may lead to a conditional offer in specific subject areas, including Computer Science and Food, with the required standard of achievement being up to two A-level grades lower than the standard offer. Once students are admitted to the University under the widening participation agenda, they are provided with extensive support, including diagnostic assessments, and peer involvement.

All pharmacy students are required to undergo an AccessNI Enhanced Level Disclosure check (equivalent to DBS in England) as a condition of entry to the MPharm course and must also pass health checks. Most applicants are dealt with by the central admissions unit, where offers are made on the basis of GCSE/A-levels and demonstrating good character. Although applicants are not normally interviewed, mature students who already have a degree undergo an interview, the purpose of which is not related to selection, but is to establish their awareness of the challenges of an additional five years of study to achieve registration as a pharmacist. There are no plans to introduce interviews for standard applicants; the School's view in this regard is that 17-18-year old students change markedly during the course, within which there are many checks and balances throughout. There is no evidence supporting the use of interviews, and the School wants to ensure that the MPharm programme is readily accessible.

Standard 5: Curriculum delivery and student experience

All criteria relating to this standard are met.

The MPharm programme has been restructured in line with the changes to the structure of the University's academic year that were first introduced in 2016/17. The main changes in the academic year have been the second semester commencing early in January, the introduction of a two/three-week student development programme after the Semester 2 examination period, and the use of progressive, continuous assessment across both semesters. The first year now starts with a two-week skills module ('Basic Skills for Pharmacy') helping students in the transition to higher education, and covering topics such as plagiarism, report writing, laboratory safety, time management and study skills. The restructuring of the programme has produced further integration of material throughout; this has been achieved by merging and redesigning modules in all years. At level 4, which includes the research project, students consider the use of medicines to treat patients with more complex diseases, including cancer and cardiovascular disease, as well as covering basic social science methodology and the evaluation and delivery of safe, effective healthcare from social, clinical and economic perspectives. In this final year level, students learn about change management and the practical strategies and leadership qualities required to work as a pharmacist; here, they also participate in weekly simulation sessions in the Pharmacy Practice Unit, where they consult with complex patients and make decisions around

diagnosis, over-the-counter prescribing and referral pathways. It is emphasised from the first year that students will be joining a profession dealing with people's health and are taught about professional behaviour, for example, through discussions on the 'Standards for Pharmacy Professionals' and the 'Pharmaceutical Society of Northern Ireland Code'. Students meet patients throughout the programme both in workshops and during placements. In workshops, students meet, for example, Parkinson's disease patients, patients with either type 1 or type 2 diabetes, patients living with HIV, cystic fibrosis patients, and representatives of NI Chest Heart and Stroke, who all discuss with the students the impact of their conditions on their day-to-day lives. Placements take place both in community pharmacy and in hospitals. Inter-professional learning takes place in all years of the course, with students participating in exercises with, for example, students of medicine and nursing; future developments in inter-professional education will be facilitated by the development of the Simulation Centre. Assessments comprise end-of-year examinations and a variety of continuous assessments throughout the year. In the early years of the course, assessment is more heavily weighted towards testing knowledge, with a progressively increasing emphasis on using methods that determine the student's ability to perform in a simulated environment, and to act independently and consistently in the complex situation of an every-day or familiar context. Assessments are directly related to learning outcomes, and are designed to assure the student's fitness to practise and to safeguard the public. The assessments require students to integrate their knowledge and to identify and solve problems in practical situations. Students now receive a great deal of formative feedback and are generally performing better than in the earlier version of the course, with teaching and assessment being more in line with life-long learning, rather than cramming for examinations.

Standard 6: Support and development for students

The single criterion relating to this standard is met.

The School of Pharmacy operates a Personal Tutor System, in which the support mechanisms in the School are organised into a tiered structure. The personal tutor is the first layer within this structure and generally, is the initial point of contact for students. Each student is assigned to a tutor at the beginning of the first year; students retain the same tutors throughout their four years of study. The School has a Lead Personal Tutor who meets with all new staff members and inducts them in the requirements for acting as a personal tutor. Students meet their tutors both individually and as a group and can see them at any time, and about any matter, whenever they need support. The tutor's role is both academic and pastoral, with signposting to the appropriate people if needed. Students meet their tutors at least three times in the first year; during the introductory meetings, tutors determine how students are coping with the transition from school. Following a personal development planning (PDP) workshop later in the semester, students have a one-to-one meeting with their tutors to discuss continuing professional development, time management, and study skills. This is followed by a placement and another meeting to discuss PDP and learning needs; this meeting identifies and addresses any problems. Tutors receive training centrally, this covering the role of the tutor, their remit, any boundaries, services to which students should be referred, for example, in matters relating to finance, and actions to be taken if the tutor suspects a student to be at risk, as well as taking into consideration any data protection issues. In addition to the personal tutor system, small-group teaching, for example, in extemporaneous dispensing and pharmacy practice classes, as well as all practical sessions, allows students to build relationships with other staff members who also provide pastoral support, as well as careers advice and assistance with CV preparation and interview skills; these small-group sessions enable staff members to identify students who are not engaging. The School office monitors students and can identify, at an early stage, those who are at risk of failing. Module coordinators can refer students to appropriate staff members and can monitor students' coursework so that borderline or failing students can be referred to student support systems; early intervention can identify the required support. Students undertake peer mentoring of international students who may suffer from homesickness and

consequent mental health issues, and can refer these students when required; this activity also promotes international cultural awareness. There is a buddy system, whereby senior students volunteer to assist their first-year juniors in settling into university life and determining how they are getting on. Students can be assigned a buddy after their first year if they wish, but there are other, extensive forms of help. Support is provided in accessing pre-registration training places through an annual careers fair that brings in employers from across the UK and Ireland. Students are given information about how to apply, including the systems used in Scotland and England, and are made aware of the different job titles and roles, and of differences in the NHS across the UK countries, including differences in legislation. Throughout the course, students are told that the roles of the pharmacist extend beyond community and hospital work, for example, to industry, and guest speakers talk about these various roles, including those in pharmacovigilance and in industry.

Standard 7: Support and development for academic staff

All criteria relating to this standard are met.

The University's strategy incorporates an emphasis on a new staff culture, which is intended to ensure that staff members feel comfortable and fully supported. Many mechanisms are in place to support all staff members involved in delivering initial education and training on the MPharm. The Staff Training and Development Unit (STDU) is a function of the Human Resources Directorate, and provides a support service to all staff in Queen's, working in partnership with schools, other centres and support functions. As such, the Unit provides significant support in a range of areas to all staff members involved in the delivery of the MPharm. Currently, courses are available covering a wide range of topics, including those concerned with the development of skills in administration, communication, research, and IT, as well as providing training in areas such as equality and diversity, finance, and health and safety. The STDU also administers the University-level induction programme for new staff; this online programme includes information from Personnel, Finance, The Staff Training and Development Unit, and from Information Services. The School also has an induction programme, with associated documentation, for all new staff members; this covers all aspects of the work of the School, including detailed information on the structure and content of the MPharm, the School's tutor system, the structure and function of the various School boards and committees, and information relating to procedures for applying for research funding, ethical approval and training courses. Numerous courses on teaching and learning are delivered through the Centre for Educational Development (CED), part of the Academic and Student Affairs Directorate. The University provides a specific Postgraduate Certificate in Higher Education Teaching (PGCHET), which is primarily aimed at new academic staff members on probation, for whom completion of this course is mandatory; this course, which covers all aspects of the design and delivery of teaching, learning and assessment, is accredited by the Higher Education Academy (HEA), which means that PGCHET graduates will automatically become eligible for HEA membership. Staff members undergo an annual appraisal process intended to review the previous year's activities, as well as setting objectives for the next year in relation to education, research, scholarly activity, and administration/management. Appraisal of staff members is undertaken by colleagues who are more senior, and who are usually in the same cognate area; all appraisers are trained. The appraisal process identifies any learning development needs, as indicated, for example, by the teaching evaluation questionnaires that are completed by students; the Head of School looks at all appraisal outcomes, and every effort is made to support staff in their development needs. All staff members are encouraged to have their teaching regularly peer reviewed, with probationary staff members being required to do so. A formal mentoring process is embedded in the probation procedure for all staff appointed to the University and mentoring support is also provided to all members of staff. The School's Director of Education is responsible for ensuring a fair distribution of workload for each staff member.

Standard 8: Management of initial education and training

Both criteria relating to this standard are met.

The Head of the School of Pharmacy is ultimately responsible for all aspects of School performance, and in this role reports to the Pro-Vice Chancellor of the Faculty of Medicine, Health and Life Sciences; she is a member of the Faculty Executive Board, which deals with decisions that affect the Faculty and its Schools. The Head of School chairs the School Management Board, additionally comprising the Director of Research, the Directors of Education, The China Queen's Campus Vice Dean, the School Manager, one member of academic staff elected by academic staff in the School, the School Athena SWAN Champion, the chief technician, and a further academic staff member appointed by the Head of School. The Management Board is responsible for developing key strategies and policies, monitoring the School's performance against a range of key performance indicators, advising the Head of School on the allocation of resources, and allocating tasks to, and receiving reports from, the School committees responsible for implementation of strategies and policies. The School committees include the Education Committee (and its constituent Sub-Groups), the Staff-Student Consultative Committee (SSCC), the Research Committee, the Research Ethics Committee, and the Safety Committee; the Education and the Staff-Student Consultative Committees are the main committees within the School of Pharmacy responsible for reviewing and making recommendations on the delivery of the MPharm degree programme. There is a monthly School Board meeting, which is an open information forum for all academic and non-academic staff members and student representatives; this Board discusses key issues and informs the School Management Board where a wider input of views is deemed necessary.

Standard 9: Resources and capacity

All criteria relating to this standard are met.

The business plan presented in the documentation anticipated a reduction in MPharm student numbers from the current total of 451 to 400 over the next five years. Financially, this was to be mitigated by increases in numbers on other programmes, as well as an increase in numbers of postgraduate students undertaking research on taught courses. As the number of Northern Ireland students is capped through the MasN policy, student numbers can grow only from outside the country and the University's emphasis is on international student recruitment. In this context, the School has developed new undergraduate BSc programmes in Pharmaceutical Science and in Pharmaceutical Biotechnology, which are delivered in part trans-nationally at China Queen's College (CQC), through a partnership with the prestigious China Medical University; here, there are approximately 200 students, with a further 100 students on a Queen's University Foundation Programme in China, although there is no intention to offer a pharmacy programme on the China campus. There has been an increase in BSc applications and a marked increase in student numbers on these courses. Many CQC students wish to engage with Queen's University for postgraduate study. The University was confident in the sustainability of the School and of the MPharm programme. The staffing, physical resources and accommodation are sufficient to run the programme, although there are increasing demands for space as the School continues to grow. There are currently 83 staff members, who contribute to the delivery of the MPharm, of whom 53 are registered (or potentially eligible for registration) with the Pharmaceutical Society NI and/or the GPhC; a further three academic staff members were recruited early in 2018. The current academic staff complement provides a necessary blend of senior and junior staff, with half of the senior staff being pharmacists. The School of Pharmacy also employs a number of teacher practitioners, honorary appointees and visiting lecturers, who, with the exception of one visiting lecturer, are all pharmacists. The School looks closely at the balance of pharmacists on the staff in relation to needs when posts are being advertised.

Standard 10: Outcomes

The team was satisfied that all 58 outcomes relating to Standard 10 are delivered at the appropriate level.

The team scrutinised a selection of learning outcomes by detailed discussions with the teaching staff; the four outcomes selected by the team for discussion in depth were 10.2.2.f, 10.2.3.m, 10.2.3.n, and 10.2.5.g (see appendix 2). Having discussed these outcomes, and having scrutinised the documentation relating to these and to the other outcomes, the team was confident that all 58 outcomes are met at the appropriate levels.

Indicative syllabus

The team was satisfied with the School's use of the Indicative Syllabus to inform its curriculum

The team agreed that the MPharm degree met the requirements of Directive 2005/36/EC of the European Parliament and of the Council on the recognition of professional qualifications for the initial education and training of pharmacists.

Appendix 1 - Standing conditions

The following are standing conditions of reaccreditation and apply to all providers:

1. The record and report include other comments from the team, and providers are required to take all comments into account as part of the accreditation process. The provider must confirm to the GPhC that required amendments have been made.
2. The provider must respond to the definitive version of the record and report within three months of receipt. The summary report, along with the provider's response, will be published on the GPhC's website for the duration of the accreditation period.
3. The provider must seek approval from the GPhC for any substantial change (or proposed change) which is, or has the potential to be, material to the delivery of an accredited course. This includes, but is not limited to:
 - a. the content, structure or delivery of the accredited programme;
 - b. ownership or management structure of the institution;
 - c. resources and/or funding;
 - d. student numbers and/or admissions policy;
 - e. any existing partnership, licensing or franchise agreement;
 - f. staff associated with the programme.
4. The provider must produce and submit to the GPhC on an annual basis:
 - a. requested data on student numbers and progression and degree awards;
 - b. requested information about the extent of human and physical resources it enjoys for the delivery and support of the degree course.
5. The provider must make students and potential students aware that successful completion of an accredited course is not a guarantee of a placement for a pre-registration year or of future employment as a pharmacist.
6. The provider must make students and potential students aware of the existence and website address where they can view the GPhC's accreditation reports and the timetable for future accreditations.
7. Whenever required to do so by the GPhC, providers must give such information and assistance as the GPhC may reasonably require in connection with the exercise of its functions. Any information in relation to fulfilment of these standing conditions must be provided in a proactive and timely manner.

Appendix 2 – Standards

GPhC standards for the initial education and training of pharmacists

NB. Information that is shaded grey or shown in grey italics is only applicable to providers offering a 5-year MPharm degree with intercalated periods of pre-registration training.

Standard 1: Patient and public safety

- 1. There must be clear procedures to address concerns about patient safety arising from pharmacy education and training. Concerns must be addressed immediately.**
 - 1.1** There must be effective systems in place to ensure that students *and trainees*:
 - 1.1.a** do not jeopardise patient safety;
 - 1.1.b** only do tasks for which they are competent, sometimes under supervision;
 - 1.1.c** are monitored and assessed to ensure they always practise safely. Causes for concern should be addressed immediately;
 - 1.1.d** have access to support for health, conduct and academic issues;
 - 1.1.e** must not be awarded an accredited degree *or pass pre-registration training* if they might pose a risk to patients or the public;
 - 1.1.f** understand what is and what is not professional behaviour and are familiar with the GPhC's *standards for pharmacy professionals (2017)*;
 - 1.1.g** understand what fitness to practise mechanisms apply to them. All schools of pharmacy must have fitness to practise procedures to deal with student causes for concern;
 - 1.1.h** undergo required health and good character checks;
 - 1.1.i** understand that it is an offence to impersonate a pharmacist. Pharmacists are registrants of the GPhC.

Standard 2: Monitoring, review and evaluation of initial education and training

- 2. The quality of pharmacy education and training must be monitored, reviewed and evaluated in a systematic and developmental way.**
 - 2.1** There must be systems and policies in place covering:
 - 2.1.a** information about roles and responsibilities and lines of accountability;
 - 2.1.b** university information on:
 - 2.1.b.i** entry requirements;
 - 2.1.b.ii** the quality of teaching, learning and assessment;
 - 2.1.b.iii** the quality of placements and other practice learning opportunities;
 - 2.1.b.iv** appraisal and feedback systems for students *and trainees*;
 - 2.1.b.v** supervision requirements;
 - 2.1.b.vi** educational resources and capacity;These must be monitored, reviewed and evaluated systematically. When an issue is identified it must be documented and dealt with promptly.
 - 2.1.c** *pre-registration tutors evaluating trainees. To do this, tutors must have access to reliable evidence about a trainee's performance. Tutors must be competent to assess the performance of trainees;*
 - 2.1.d** *the quality and development of pre-registration tutors*

Standard 3: Equality, diversity and fairness

- 3. Initial pharmacy education and training must be based on principles of equality, diversity and fairness. It must meet the requirements of all relevant legislation.**
- 3.1 Systems and policies for capturing equality and diversity data. Concerns should be documented, addressed and disseminated;
- 3.2 Strategies for staff training in equality and diversity

Standard 4: Selection of students *and trainees*

- 4. Selection processes must be open, fair and comply with relevant legislation. Processes must ensure students *and trainees* are fit to practise at the point of selection. Selection includes recruitment and admissions.**
- 4.1 Selection process must give applicants the information they need to make an informed application.
- 4.2 Selection criteria must be explicit. They should include:
 - 4.2.a meeting academic and professional entry requirements;
 - 4.2.b meeting English language requirements appropriate to MPharm degree study. Guidelines issued by English language testing bodies should be followed to ensure that admissions language requirements are appropriate;
 - 4.2.c meeting numeracy requirements;
 - 4.2.d taking account of good character checks, such as Criminal Records Bureau (CRB)/Disclosure Scotland checks;
 - 4.2.e passing health checks (subject to reasonable adjustments being made). Health checks could include self-evaluations and/or evaluations by healthcare professionals;
 - 4.2.f recognising prior learning, where that is appropriate.
- 4.3 Selectors should apply selection criteria fairly. They should be trained to do this. Training should include equality and diversity matters

Standard 5: Curriculum delivery and the student experience

- 5. The curriculum for MPharm degrees *and the pre-registration scheme* must deliver the outcomes in Standard 10. Most importantly, curricula must ensure students *and trainees* practise safely and effectively. To ensure this, pass criteria must describe safe and effective practice.**
- 5.1 Curricula must be integrated.
- 5.2 Curricula must be progressive, dealing with issues in an increasing more complex way until the right level of understanding is reached.
- 5.3 An MPharm must be delivered in an environment which places study in a professional and academic context and requires students to conduct themselves professionally. *Pre-registration training must be delivered in a professional environment which requires trainees to conduct themselves professionally.*
- 5.4 An MPharm must be delivered in an environment informed by research. This means that whether or not all staff are engaged in research, their teaching must be informed by research.
- 5.5 An MPharm degree teaching and learning strategy must set out how students will achieve the outcomes in Standard 10. Learning opportunities must be structured to provide:
 - 5.5.a an integrated experience of relevant science and pharmacy practice;
 - 5.5.b a balance of theory and practice;

- 5.5.c independent learning skills.
- 5.6 The MPharm degree curriculum must include practical experience of working with patients, carers and other healthcare professionals. Practical experience should increase year on year.
- 5.7 There must be a clear assessment strategy for the MPharm degree. Assessment methods must measure the outcomes in Standard 10.
- 5.8 The MPharm degree assessment strategy should include:
 - 5.8.a diagnostic assessments;
 - 5.8.b formative assessments;
 - 5.8.c summative assessments;
 - 5.8.d timely feedback.
- 5.9 Academic regulations must be appropriate for a degree that is both academic and professional and may lead to further professional training. As a general principle, all assessments must be passed. This means that condonation, compensation, trailing, extended re-sit opportunities and other remedial measures should be extremely limited, if they are permitted at all. MPharm degree academic regulations may be more stringent than university norms. This may include higher than usual pass marks for assessments demonstrating knowledge and skills essential to safe and effective pharmacy practice.
- 5.10 Marking criteria must be used for all assessments and all pass criteria must reflect safe and effective practice.
- 5.11 Patient safety must be paramount in assessments: any evidence of an assessment demonstrating unsafe practise must result in failure.
- 5.12 *A pre-registration training plan must describe how the learning outcomes for pre-registration will be delivered.*
- 5.13 *A pre-registration training plan must describe all assessments, including tutor evaluations and tutor sign-offs.*

Standard 6: Support and development for students *and* trainees

- 6. Students *and* trainees must be supported to develop as learners and professionals during their initial education and training.**
- 6.1 A range of mechanisms must be in place to support students *and* trainees to develop as learners and professionals.

Standard 7: Support and development for academic staff *and* pre-registration tutors

- 7. Anyone delivering initial education and training should be supported to develop in their professional roles.**
- 7.1. There must be a range of mechanisms in place to support anyone delivering initial education and training to develop in their role.
- 7.2. Induction programmes are provided for and university staff as appropriate. This should include induction programmes for non-pharmacists working on MPharm degrees.
- 7.3. Everyone involved in delivering the curriculum should have:
 - 7.3.a effective supervision;
 - 7.3.b an appropriate and realistic workload;
 - 7.3.c effective personal support;
 - 7.3.d mentoring;
 - 7.3.e time to learn;
 - 7.3.f continuing professional development opportunities.
- 7.4. *Tutors should have an identified source of peer support.*

Standard 8: Management of initial education and training

8. Initial pharmacist education and training must be planned and maintained through transparent processes which must show who is responsible for what at each stage.

- 8.1. All education and training will be supported by a defined management plan with:
 - 8.1.a a schedule of responsibilities
 - 8.1.b defined structures and processes to manage the delivery of education and training

Standard 9: Resources and capacity

9. Resources and capacity are sufficient to deliver outcomes.

- 9.1 There must be:
 - 9.1.a robust and transparent mechanisms for securing an appropriate level of resource for delivering an accreditable MPharm degree;
 - 9.1.b sufficient staff from relevant disciplines to deliver the curriculum to students *and trainees*. Staff must be appropriately qualified and experienced. The staffing profile must include:
 - 9.1.b.i sufficient numbers of pharmacists – registrants of the GPhC – with experience of teaching in higher education to ensure that an MPharm degree can produce students equipped to enter pharmacist pre-registration training in Great Britain.
 - 9.1.b.ii sufficient numbers of pharmacists to act as tutors and professional mentors at university *and in pre-registration*. Not all personal tutors must be pharmacists.
 - 9.1.b.iii pharmacists who are leaders in the profession and in their university, who can influence university policy relevant to pharmacy
 - 9.1.b.iv non-pharmacist academics who can influence school and university policy relevant to pharmacy
 - 9.1.b.v staff who are sufficiently experienced to supervise research. It would be unusual for anyone to supervise research at a particular level unless they had researched to that level or beyond. New research supervisors must be mentored and signed off as being fit to supervise after a period of mentoring
 - 9.1.b.vi science academics who understand the relevance of their discipline to pharmacy and deliver their area of expertise in a pharmaceutical context
 - 9.1.b.vii academic pharmacists and other experienced MPharm degree staff who are able to act as mentors to non-pharmacist colleagues
 - 9.1.c *pre-registration tutors who meet the GPhC's standards for pre-registration tutors;*
 - 9.1.d career pathways in universities for all staff teaching on MPharm degrees, including pathways for practice staff
 - 9.1.e clear lines of authority and responsibility for the strategic organisation and day-to-day management of placements
 - 9.1.f training and ongoing support for all non-pharmacists involved in the delivery of MPharm degrees which must help them understand:
 - 9.1.f.i help and understand the relevance of their work to pharmacy
 - 9.1.f.ii how to deliver their area of expertise in a pharmaceutical context
 - 9.1.g appropriate learning resources
 - 9.1.h accommodation and learning resources that are fit for purpose
 - 9.1.i *pre-registration premises which meet the GPhC's standards for pre-registration premises*

Standard 10: Outcomes

10.1 Expectations of a pharmacy professional

Learning outcome	MPharm	Pre-reg
10.1.a Recognise ethical dilemmas & respond in accordance with relevant codes of conduct and behaviour	Shows how	<i>Does</i>
10.1.b Recognise the duty to take action if a colleague's health, performance or conduct is putting patients or public at risk	Knows how	<i>Knows how</i>
10.1.c Recognise personal health needs, consult and follow the advice of a suitably qualified professional, and protect patients or public from any risk posed by personal health	Does	<i>Does</i>
10.1.d Apply the principles of clinical governance in practice	Knows how	<i>Does</i>
10.1.e Demonstrate how the science of pharmacy is applied in the design and development of medicines and devices	Shows how	<i>Knows how</i>
10.1.f Contribute to the education and training of other members of the team, including peer review and assessment	Shows how	<i>Does</i>
10.1.g Contribute to the development of other members of the team through coaching and feedback	Knows how	<i>Shows how</i>
10.1.h Engage in multidisciplinary team working	Knows how	<i>Does</i>
10.1.i Respond appropriately to medical emergencies, including provision of first aid	Knows how	<i>Shows how</i>

10.2 The skills required in practice

10.2.1 Implementing health policy

Learning outcome	MPharm	Pre-reg
10.2.1.a Promote healthy lifestyles by facilitating access to and understanding of health promotion information	Shows how	<i>Does</i>
10.2.1.b Access & critically evaluate evidence to support safe, rational & cost effective use of medicines	Shows how	<i>Knows how</i>
10.2.1.c Use the evidence base to review current practice	Shows how	<i>Does</i>
10.2.1.d Apply knowledge of current pharmacy-related policy to improve health outcomes	Knows how	<i>Shows how</i>
10.2.1.e Collaborate with patients, the public and other healthcare professionals to improve patient outcomes	Knows how	<i>Shows how</i>
10.2.1.f Play an active role with public and professional groups to promote improved health outcomes	Knows how	<i>Knows how</i>
10.2.1.g Contribute to research & development activities to improve health outcomes	Knows how	<i>Knows how</i>
10.2.1.h Provide evidence- based medicines information	Shows how	<i>Does</i>

10.2.2 Validating therapeutic approaches and supplies prescribed and over-the-counter medicines

Learning outcome	MPharm	Pre-reg
10.2.2.a Identify and employ the appropriate diagnostic or physiological testing techniques in order to promote health	Knows how	<i>Shows how</i>

10.2.2.b Identify inappropriate health behaviours and recommend suitable approaches to interventions	Shows how	<i>Does</i>
10.2.2.c Instruct patients in the safe and effective use of their medicines and devices	Shows how	<i>Does</i>
10.2.2.d Analyse prescriptions for validity and clarity	Shows how	<i>Does</i>
10.2.2.e Clinically evaluate the appropriateness of prescribed medicines	Shows how	<i>Does</i>
10.2.2.f Provide, monitor and modify prescribed treatment to maximise health outcomes	Shows how	<i>Does</i>
10.2.2.g Communicate with patients about their prescribed treatment	Shows how	<i>Does</i>
10.2.2.h Optimise treatment for individual patient needs in collaboration with the prescriber	Shows how	<i>Does</i>
10.2.2.i Record, maintain and store patient data	Shows how	<i>Does</i>
10.2.2.j Supply medicines safely and efficiently, consistently within legal requirements and best professional practice. NB This should be demonstrated in relation to both human and veterinary medicines.	Shows how	<i>Does</i>

10.2.3 Ensuring safe and effective systems are in place to manage risk inherent in the practice of pharmacy and the delivery of pharmaceutical services

Learning outcome	MPharm	Pre-reg
10.2.3.a Ensure quality of ingredients to produce medicines and products	Knows how	<i>Shows how</i>
10.2.3.b Apply pharmaceutical principles to the formulation, preparation and packaging of products	Shows how	<i>Shows how</i>
10.2.3.c Verify safety and accuracy utilising pharmaceutical calculations	Does	<i>Does</i>
10.2.3.d Develop quality management systems including maintaining appropriate records	Shows how	<i>Shows how</i>
10.2.3.e Manage and maintain quality management systems including maintaining appropriate records	Shows how	<i>Does</i>
10.2.3.f Procure and store medicines and other pharmaceutical products working within a quality assurance framework	Knows how	<i>Does</i>
10.2.3.g Distribute medicines safely, legally and effectively	Knows how	<i>Does</i>
10.2.3.h Dispose of medicines safely, legally and effectively	Knows how	<i>Does</i>
10.2.3.i Manage resources in order to ensure work flow and minimise risk in the workplace	Knows how	<i>Shows how</i>
10.2.3.j Take personal responsibility for health and safety	Does	<i>Does</i>
10.2.3.k Work effectively within teams to ensure safe and effective systems are being followed	Knows how	<i>Does</i>
10.2.3.l Ensure the application of appropriate infection control measures	Shows how	<i>Does</i>
10.2.3.m Supervise others involved in service delivery	Knows how	<i>Does</i>
10.2.3.n Identify, report and prevent errors and unsafe practice	Shows how	<i>Does</i>
10.2.3.o Procure, store and dispense and supply veterinary medicines safely and legally	Knows how	<i>Knows how</i>

10.2.4 Working with patients and the public

Learning outcome	MPharm	Pre-reg
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10.2.4.a	Establish and maintain patient relationships while identifying patients' desired health outcomes and priorities	Shows how	<i>Does</i>
10.2.4.b	Obtain and record relevant patient medical, social and family history	Shows how	<i>Does</i>
10.2.4.c	Identify and employ the appropriate diagnostic or physiological testing techniques to inform clinical decision making	Knows how	<i>Shows how</i>
10.2.4.d	Communicate information about available options in a way which promotes understanding	Shows how	<i>Does</i>
10.2.4.e	Support the patient in choosing an option by listening and responding to their concerns and respecting their decisions	Shows how	<i>Does</i>
10.2.4.f	Conclude consultation to ensure a satisfactory outcome	Shows how	<i>Does</i>
10.2.4.g	Maintain accurate and comprehensive consultation records	Shows Does	<i>Does</i>
10.2.4.h	Provide accurate written or oral information appropriate to the needs of patients, the public or other healthcare professionals	Shows how	<i>Does</i>

10.2.5 Maintaining and improving professional performance

Learning outcome	MPharm	Pre-reg	
10.2.5.a	Demonstrate the characteristics of a prospective professional pharmacist as set out in relevant codes of conduct and behaviour	Does	<i>Does</i>
10.2.5.b	Reflect on personal and professional approaches to practice	Does	<i>Does</i>
10.2.5.c	Create and implement a personal development plan	Does	<i>Does</i>
10.2.5.d	Review and reflect on evidence to monitor performance and revise professional development plan	Does	<i>Does</i>
10.2.5.e	Participate in audit and in implementing recommendations	Knows how	<i>Shows how</i>
10.2.5.f	Contribute to identifying learning and development needs of team members	Knows how	<i>Does</i>
10.2.5.g	Contribute to the development and support of individuals and teams	Knows how	<i>Does</i>
10.2.5.h	Anticipate and lead change	Knows how	<i>Shows how</i>

Appendix 3 – Indicative syllabus

It is expected that education providers will use the indicative syllabus to develop a detailed programme of study which will enable pharmacists to meet the learning outcomes.

A1.1 How medicines work

Therapeutics

- Routes of administration
- New therapeutic advances
- Infection control
- Complementary therapies
- Clinical therapeutic uses of drugs

Applied Physical, Chemical and Biological sciences

- Sources and purification of medicinal substances
- Physicochemical characteristics of drugs and biological systems

- Thermodynamics and chemical kinetics
- (Bio)Analytical principles and methods
- Drug design and discovery
- Cell and molecular biology
- Biochemistry
- Genetics
- Microbiology
- Immunology
- Pharmaceutical chemistry
- Drug identification
- Drug synthesis

Pharmacology, pharmacokinetics & pharmacodynamics

- Contraindications, adverse reactions and drug interactions
- ADME
- Prediction of drug properties
- Pharmacogenetics and pharmacogenomics
- Drug and substance misuse
- Clinical toxicology and drug-over-exposure
- Molecular basis of drug action
- Metabolism

Pharmaceutical technology including manufacturing & engineering science

- Biotechnology
- Manufacturing methods
- Quality assurance processes
- Sterilisation and asepsis
- Environmental control in manufacturing

Formulation and material science

- Materials used in formulations and devices
- Biopharmaceutics, developmental pharmaceuticals, pre-formulation and formulation studies
- Design and standardization of medicines
- Microbiological contamination
- Contamination control
- Product stability
- Medical devices

A1.2 How people work

Normal & abnormal structure & function

- Nutrition
- Physiology
- Pathology
- Infective processes

Sociology

- Social and behavioural science

Health psychology

- Health promotion
- Disease prevention
- Behavioural medicine

Objective diagnosis

- Differential diagnosis
- Symptom recognition
- Diagnostic tests

Epidemiology

- Aetiology and epidemiology of (major) diseases

A1.3 How systems work

Healthcare management

- Public health
- Organisations: NHS, DH, govt priorities
- Other professionals
- Health care systems

Evidence-based practice

- Health information systems/ resources
- Health policy and (pharmaco)economics

Professional regulation

- Legislation
- Professional ethics and fitness to practise
- Sale and supply of medicines
- CPD
- Political and legal framework

Medicines regulation

- Evaluation and regulation of new drugs and medicines
- Pharmacopoeial specifications and biological standards
- Medicines licensing
- Product quality, safety and efficacy
- The supply chain
- Packaging, labelling and patient information

Clinical governance

- SOPs
- Research methodology / research ethics
- Risk & quality management
- Good manufacturing/dispensing practice
- Good clinical practice
- Health policy, clinical and science research methods

Clinical management

- Disease management
- Chronic medicines management
- Medicines use review
- Care planning

Workplace Regulation

- Health & Safety
- Sexual boundaries

- Independent Safeguarding Authority
- Data protection
- FOIA
- Consumer protection incl. complaints procedures

A1.4 Core and transferable skills

Professionalism

Research and research methods

Critical appraisal

- Audit and learning from errors

Problem solving

- Study skills
- Team-working skills

Clinical decision making

- Leadership skills

Accurate record keeping

Reflective practice (incl. continuing professional development)

Effective communication

- Interpersonal skills
- Medical terminology

Interpret & interrogate clinical data

Analyse & use numerical data

Pharmaceutical numeracy

Technological literacy

A1.5 Attitudes and values

See the GPhC *Code of Conduct for pharmacy students (2010)* and *Standards of conduct, ethics and performance (2010)*